



STATE OF MARYLAND

DMHM

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October 14, 2011

Public Health & Emergency Preparedness Bulletin: # 2011:40 Reporting for the week ending 10/08/11 (MMWR Week #40)

CURRENT HOMELAND SECURITY THREAT LEVELS

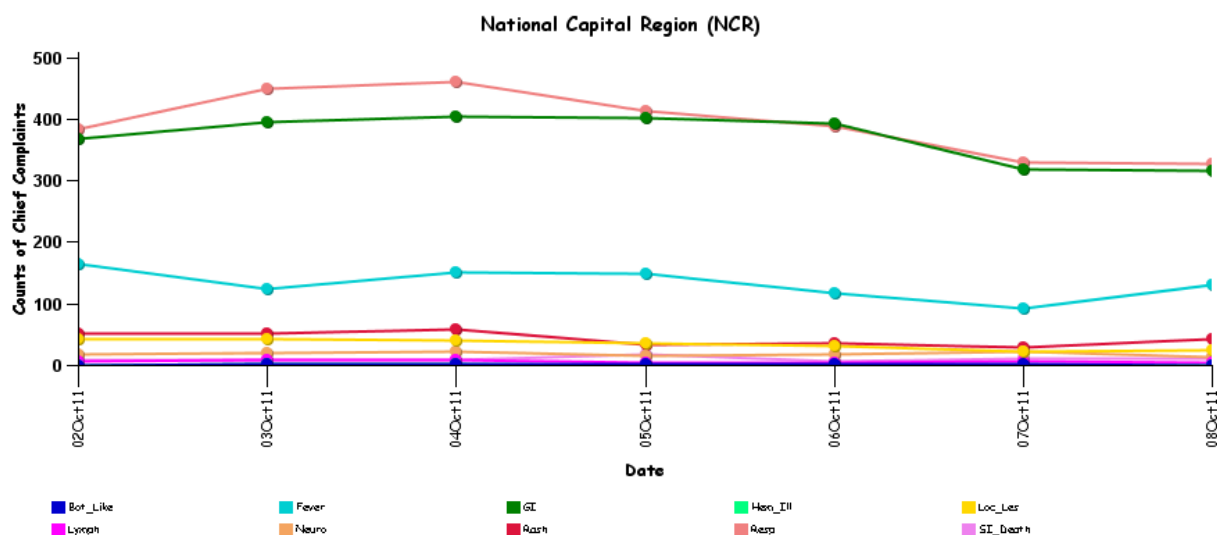
National: No Active Alerts
Maryland: Level One (MEMA status)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

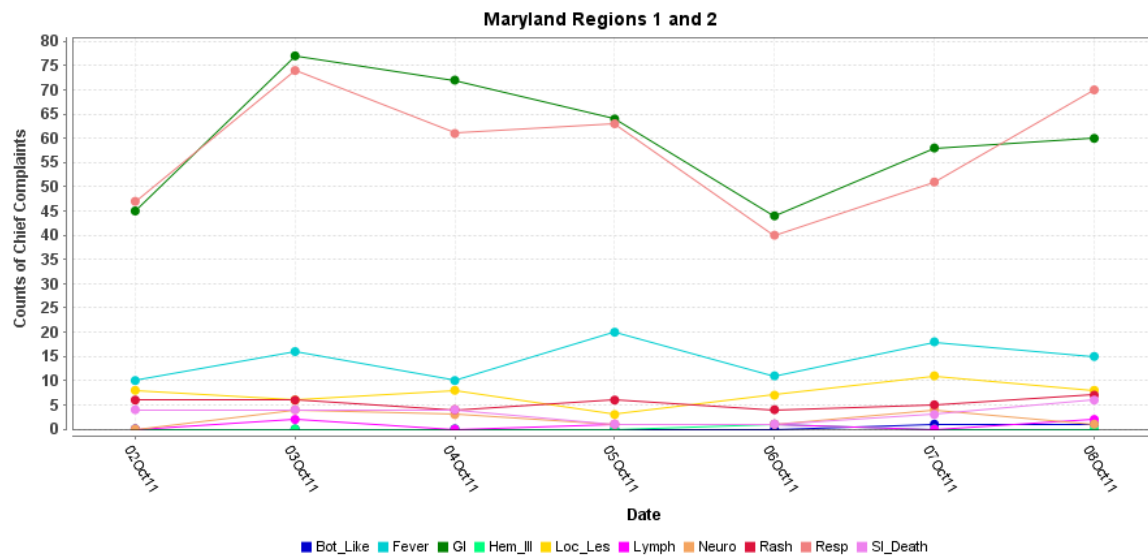
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

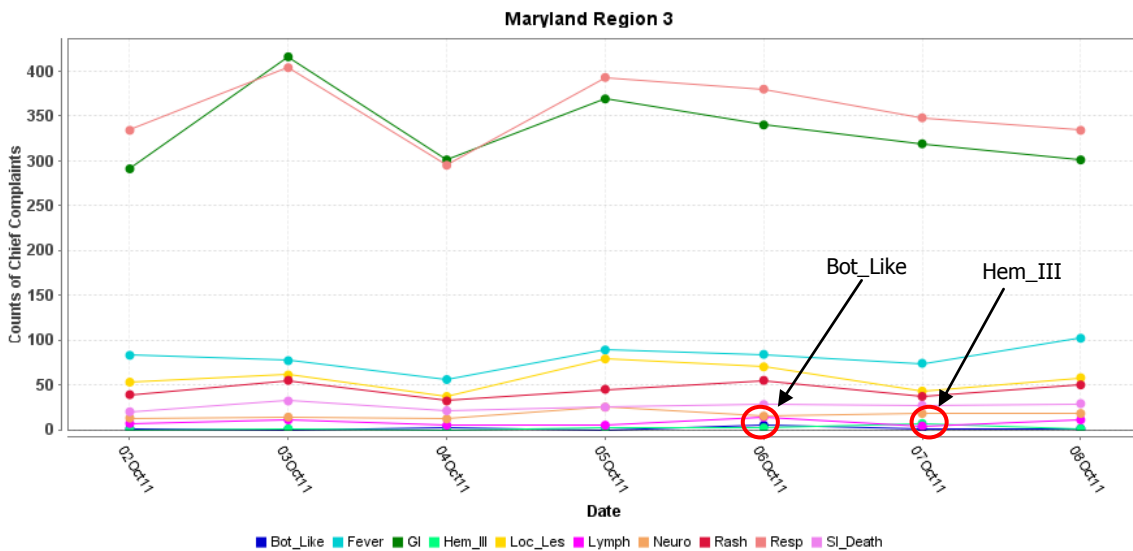


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

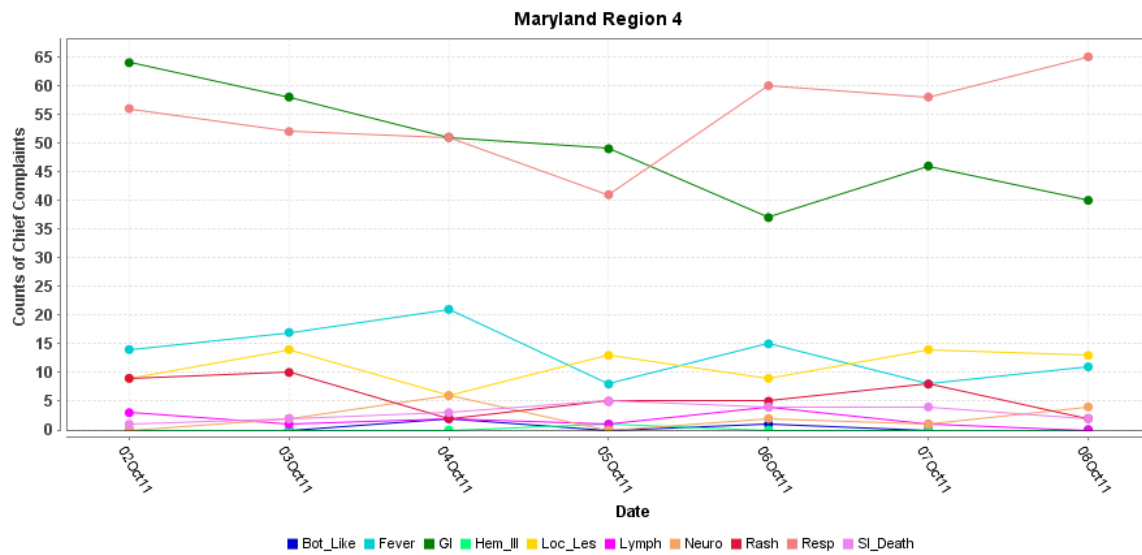
MARYLAND ESSENCE:



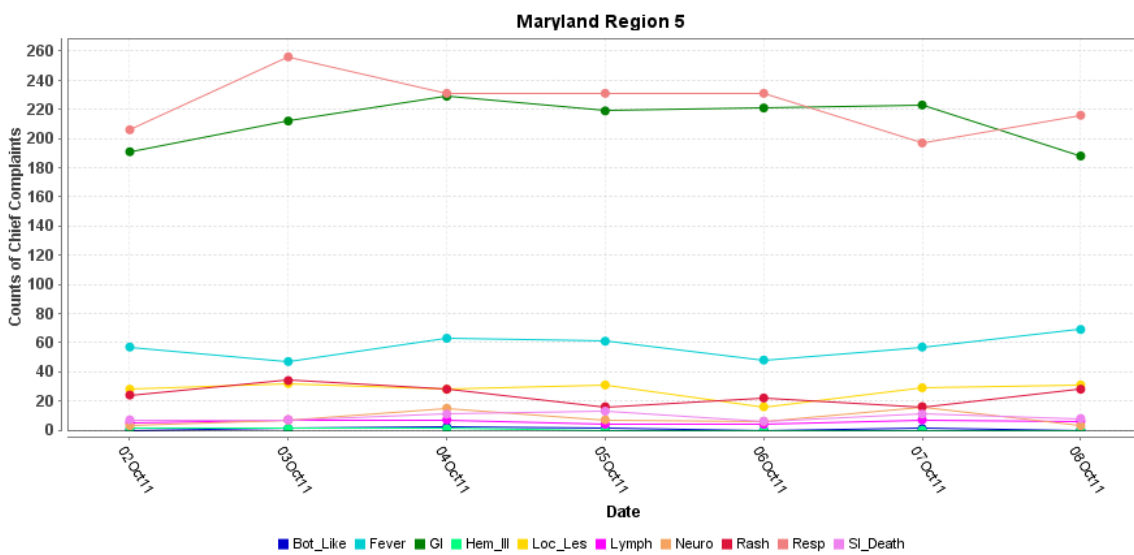
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

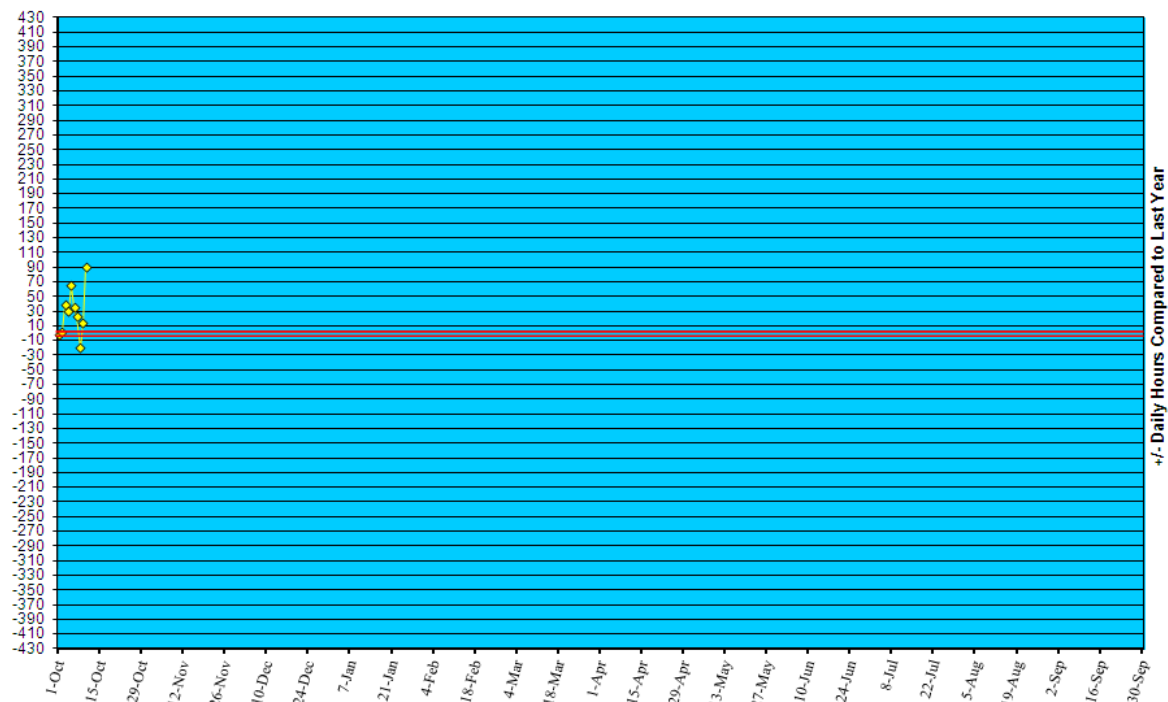


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/11.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '11 to October 08, '11



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in September 2011 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

| Meningitis: | <u>Aseptic</u> | <u>Meningococcal</u> |
|--|-----------------------|-----------------------------|
| New cases (October 2 – October 8, 2011): | 17 | 0 |
| Prior week (September 25 – October 1, 2011): | 9 | 0 |
| Week#40, 2010 (October 3 – October 9, 2010): | 23 | 0 |

3 outbreaks were reported to DHMH during MMWR week 40 (October 2 – October 8, 2011).

1 Foodborne outbreak

1 outbreak of GASTROENTERITIS/FOODBORNE associated with a Place of Worship

2 Respiratory illness outbreaks

1 outbreak of ILI/PNEUMONIA in a Nursing Home

1 outbreak of LEGIONELLOSIS associated with a Hotel

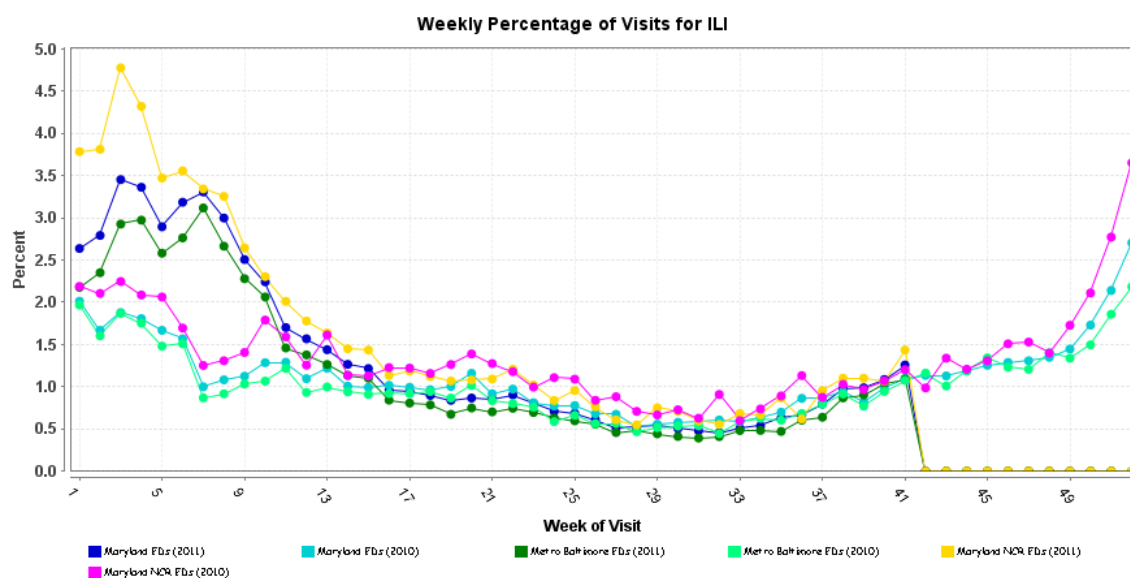
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May.

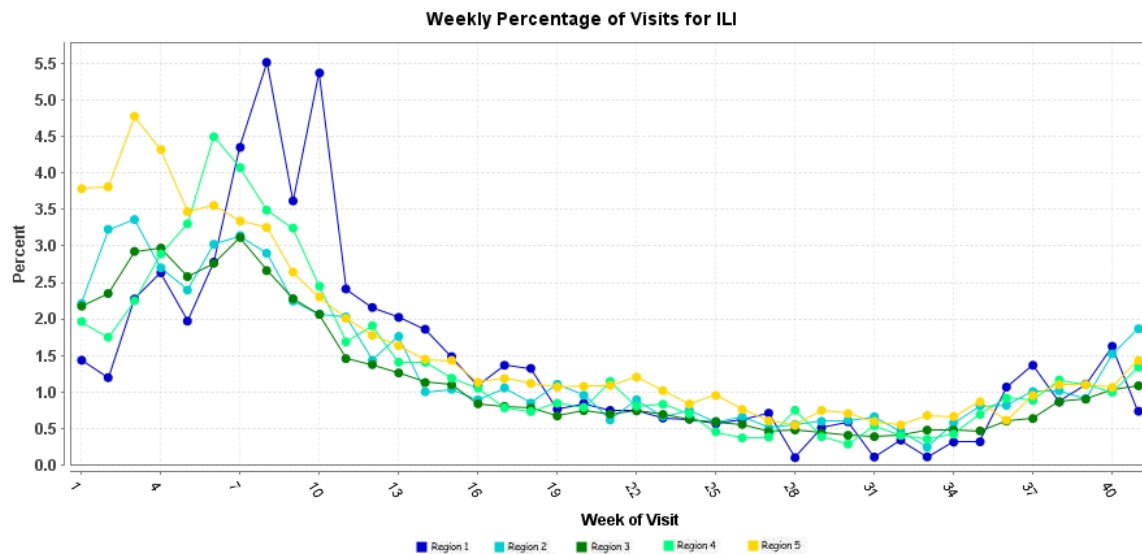
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



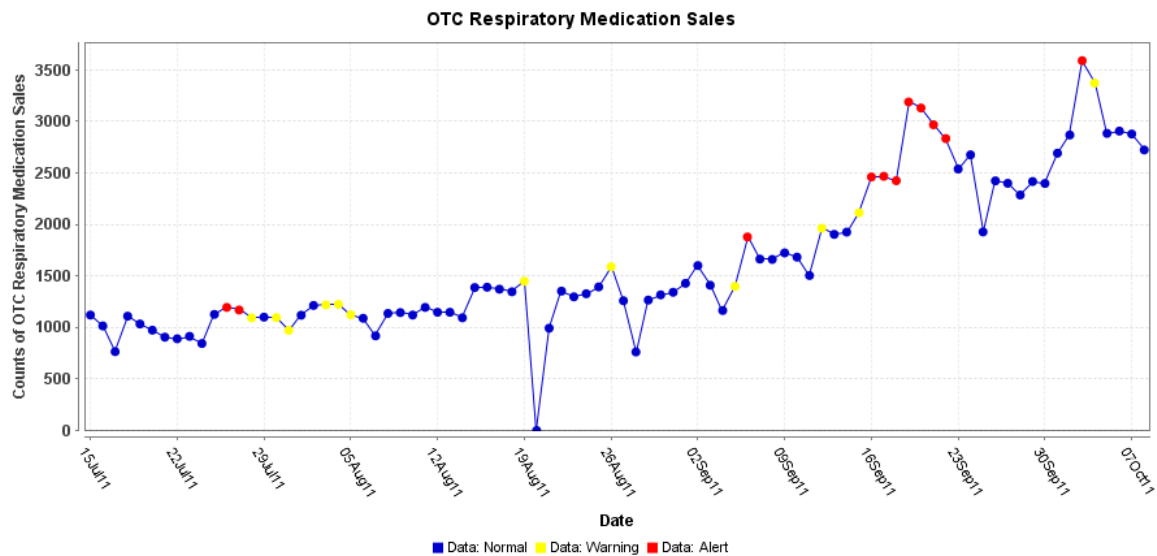
* Includes 2010 and 2011 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2011 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

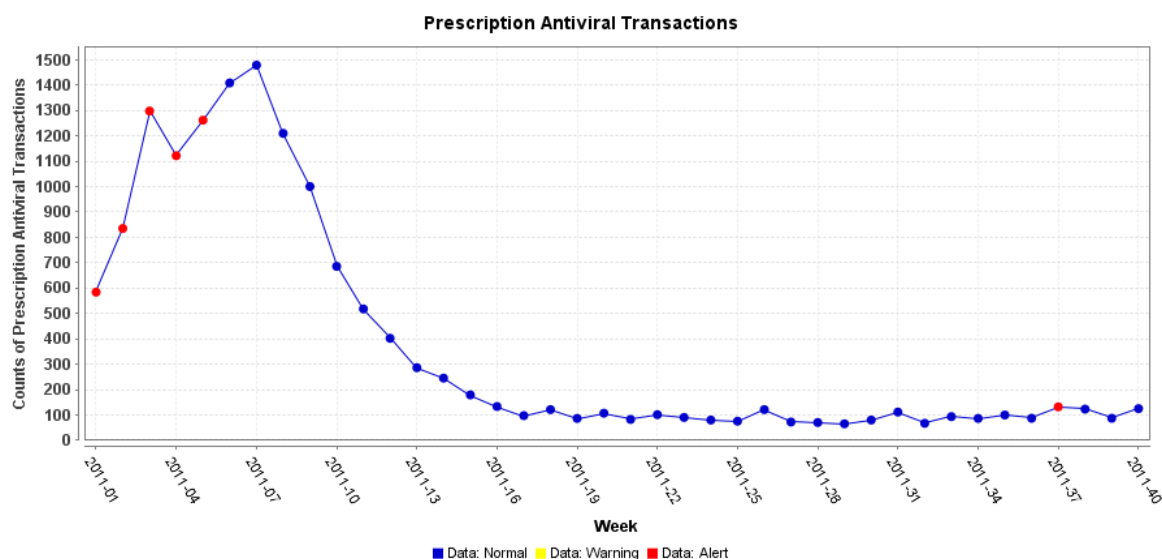
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of September 16, 2011, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 564, of which 330 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA: 26 September 2011, H5N1 bird flu [avian A/H5N1 influenza virus] can kill humans but has not gone pandemic because it cannot spread easily among us. That might change: 5 mutations in just 2 genes have allowed the virus to spread between mammals [ferrets] in the lab. What's more, the virus is just as lethal [to ferrets] despite the mutations. "The virus is transmitted as efficiently as seasonal flu," says Ron Fouchier of the Erasmus Medical Centre in Rotterdam, the Netherlands, who reported the work at a scientific meeting on flu last week in Malta. "This shows clearly that [the H5N1 virus] can change in a way that allows transmission and still cause severe disease in humans. It's scary," says Peter Doherty, a 1996 Nobel prizewinner for work in viral immunology. H5N1 evolved in poultry in east Asia and has spread across Eurasia since 2004. In that time, 565 people are known to have caught it; 331 died. No strain [of the avian H5N1 virus] that spreads readily among mammals has emerged in that time, despite millions of infected birds and infections in people, cats and pigs. Efforts to create such a virus in the lab have failed, and some virologists think H5N1 simply cannot do it. The work by Fouchier's team suggests otherwise. They 1st gave H5N1 3 mutations known to adapt bird flu to mammals. This version of the virus killed ferrets, which react to flu viruses in a similar way to humans. The virus did not transmit between them, though. Then the researchers gave the virus from the sick ferrets to more ferrets, a standard technique for making pathogens adapt to an animal. They repeated this 10 times, using stringent containment. The 10th round of ferrets shed an H5N1 strain that spread to ferrets in separate cages and killed them. The process yielded viruses with many new mutations, but 2 were in all of them. Those plus the 3 added deliberately "suggest that as few as 5 are required to make the virus airborne," says Fouchier. He will now test H5N1 made with only those 5. All the mutations have been seen separately in H5N1 from birds. "If they occur separately, they can occur together," says Fouchier. Malik Peiris of the University of Hong Kong, a flu virologist, says this means H5N1 transmissible between humans can evolve in birds, where it is circulating already, without needing to spend time in mammals such as pigs. Peter Palese, a flu specialist at Mount Sinai Medical Center in New York

City who has expressed doubts that H5N1 can adapt to mammals, is not convinced. "Ferrets are not humans," he says. "H5N1 has been around for a long time" and failed to mutate into a form that can jump between people. "That it has not adapted doesn't mean it cannot," replies Jeffery Taubenberger of the US National Institutes of Health in Bethesda, Maryland, who studies how a bird flu became the deadly pandemic of 1918. "It simply means that so far, it has not, luckily for us."

NATIONAL DISEASE REPORTS

BOTULISM (UT): 5 October 2011, A dozen inmates were sickened, including 3 in critical condition, in a suspected botulism outbreak after they drank alcohol brewed inside a prison cell, Utah health officials said Wed 5 Oct 2011. 8 male prisoners who were hospitalized had exhibited botulism symptoms and preliminary tests were positive for the disease in 2 of the men, said Dr Dagmar Vitek, the medical director of the Salt Lake Valley Health Department. It was not clear where the drink was made, what its ingredients were, or who was responsible for its production. Prison officials believe the inmates drank the cell brew, often referred to as "pruno", over the weekend [1-2 Oct 2011], corrections department spokesman Steve Gehrke said. Vitek said she understood the liquid is typically made with fruit, water, and sugar. Bread and raw potato are other common ingredients, she said. "It's obviously considered contraband," said Gehrke, "But right now, we're not really focused on the disciplinary aspect of this, we want to focus on the health aspect and to take steps to prevent it from happening again." It's not uncommon for inmates to make their own alcohol, although it's a violation of prison rules, Gehrke said. Health official are testing samples of the "pruno" to pinpoint the specific bacteria that triggered the disease, which has 7 different strains. Those results are not expected for several days, Vitek said. Most of the 12 inmates became sick on Sat 1 October 2011, she said. The last illness was reported 2 days later, and officials believe they have identified everyone who might be at risk, although the incubation period for the disease can be as long as 8 days, Vitek said. The 8 hospitalized inmates were treated with an antitoxin obtained from the CDC. 3 of them remained in critical condition Wed 5 Oct 2011, while 4 others were being treated at the prison infirmary, Vitek said. The disease is rare in Utah, which last reported 2 cases in 2003. Before that, the last known case was in 1993, Vitek said. Data from the CDC shows an average of 145 cases of botulism are annually reported in the USA, of which 15 percent are foodborne and typically caused by improper home canning. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

LISTERIA (USA): 7 October 2011, A total of 9 more cases and 3 more deaths have been reported since 3 Oct 2011 in the *Listeria* outbreak tied to cantaloupe, bringing the totals to 109 cases with 21 deaths, the Centers for Disease Control and Prevention (CDC) said today (7 Oct 2011). 4 states -- Iowa, New York, Oregon, and South Dakota -- had their 1st cases, raising the number of affected states to 24, the CDC update shows. The latest deaths included one each in Indiana, New York, and Wyoming. The cases have been linked to Rocky Ford brand cantaloupe from Jensen Farms in Colorado. Most of those sickened in the outbreak are over the age of 60, and the median age is 77. Nearly all patients for whom information was available -- 105 of 107 -- were hospitalized. CDC officials have called the outbreak the most deadly foodborne disease episode in a decade. Last week officials said they expected reports of cases to continue for several weeks, as the incubation time for listeriosis is up to 2 months. In a related development, a company in western New York has recalled 4800 packages containing cantaloupe because of possible *Listeria* contamination related to the Jensen Farms recall, the Associated Press reported today. The firm, Fruit Fresh Up Inc. of Depew, said the products included cantaloupe pieces and various fruit salads sold in the Buffalo area through stores and caterers between 31 Aug and 11 Sep [2011], the story said. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

FOODBORNE ILLNESS (INDIA): 4 October 2011, The recent food poisoning incident at the Indian Institute of Technology (IIT), Bombay, is being linked to *Klebsiella*. The caterers who were serving in the IIT [Indian Institute of Technology] canteen, were completely clueless about which food content could have possibly triggered food poisoning and so were the FDA (Food and Drug Administration, Maharashtra) officials. It was learned that 4 samples of the stools and water were taken, out of which 3 indicated *Klebsiella* and the last one *E. coli*. However, the same could not be confirmed, as the FDA was still investigating its origin, informed Mahesh Zagade, food safety commissioner, FDA, Maharashtra. A source informed Food and Beverage News that *Klebsiella* was linked to pneumonia and known to reside in the colon. "Something in the food must have triggered its multiplicity. The samples needed to be cultured for validation of the claim," the source said. "The predominant [gastrointestinal] symptoms of *Klebsiella* are watery diarrhea and cramps. However, vomiting does not occur. Organisms other than commonly identified pathogens should not be ignored if present in high concentrations in both food and feces of infected persons," states Dr Sardesai, technical director, Equinox Labs. Meanwhile the IIT said that the caterers who were given the contract of the canteen were associated with the institute for the last 4 years and that this was the 1st incident of its kind. "We are equally concerned and have given strict instructions to the cooks to wear caps, wash their hands thoroughly, and follow precautions," said a source. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

SALMONELLOSIS (CANADA): 4 October 2011, Six patients and an employee at the Kenneth E. Spencer Memorial Home in Moncton have been infected with salmonellosis in an outbreak that started 18 Sep 2011 at the facility. A resident has died. "Someone did die. They did have salmonellosis but at the particular time they had multiple diagnoses," said Barbara Tremble Cook, the nursing home's executive director. "So I guess we can't say with certainty that would have caused their death, but it could have been a contributing factor." Cook said the resident received proper assistance. "When they were not responding to treatment, they

were transported to hospital and saw medical assistance there," she said. She added that the facility's kitchen has been found clear of any trace of salmonella. Public health officials continue to monitor the outbreak. The facility remains open to visitors as the investigation continues. Spencer's is home to about 200 people and employs about 230 staff. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

LEGIONELLOSIS (UK) 7 October 2011, There have been 9 cases of Legionnaires' disease in the United Kingdom (UK), all linked to travel to Corfu [Greece] since August [2011], according to the Health Protection Agency [HPA]. However, the HPA cannot rule out a UK source of the infections and is still investigating. It is advising people to be aware of the symptoms of Legionnaires' disease if they are going to the Greek island. The illness can lead to severe pneumonia and is sometimes fatal. Symptoms can take up to 2 weeks to develop after infection and generally start as a "flu-like" illness. It can be treated with antibiotics. The bacteria that cause the disease cannot be spread from person to person. They can live in water so cooling systems, showers and taps are common sources of infection. Prof Nick Phin, from the Legionnaires' disease department at the HPA, said: "We are concerned that UK residents travelling to Corfu should be aware of this potential risk, however we are not suggesting that people change their holiday plans. We are continuing our investigations so we that can provide the best advice for travelers and minimize the risk of further cases. We will also assist the Greek Public Health authorities in their investigations into a possible source or sources within Corfu. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: <http://preparedness.dhmdh.maryland.gov/>

Maryland's Resident Influenza Tracking System: <http://dhmdh.maryland.gov/flusurvey>

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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